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**Title:** Large chest wall resection and reconstruction using titanium meshplate and pedicled muscular flap:  
Report of 6 cases

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**Body:** The aim of this clinical study was to evaluate effectiveness of titanium meshplate for chest wall reconstruction after chest wall tumor resection. Between 2009 and 2012, 6 patients with chest wall tumors were treated surgically. There were 3 female and 3 male patients and their ages ranged from 26 to 76 years. The patients were admitted due to chest pain and swelling. Tumors were placed on sternum in 3 of the patients and on anterolateral chest wall in 3 of them. After tumor resection, defect size ranged from 10 cm. x 14 cm. to 12 cm. x 20 cm. Chest wall reconstructions were performed using titanium meshplate and pedicled muscular flaps. Titanium meshplates were fixed in ribs and/or sternum by titanium wires or screws.

Postoperative pathology for sternal tumors were condrosarcoma, malign melanoma and liposarcoma, and for chest wall tumors they were osteocondroma, malign fibrous histiocytoma and lymphoma. There were no paradoxical movement, difficulty in breathing, or prosthesis-related complications during the follow-up period. Only in one patient muscular flap necrosis has occurred. Therefore second operation was performed for removal of necrotic muscular flap. The mean postoperative follow-up period was 15 months (range, 2–36 months). We consider that, titanium meshplate is an easily applicable and suitable material to use in the reconstruction of large chest wall defect.